



**Virginia Geographic  
Information Network**

The following information was compiled in order to define the spectrum of imagery options available in the Commonwealth. The information was developed from vendor web pages, current product catalogues and phone conversations with Vendor marketing staff. All information is current as of February 2001.

If you have any questions or comments about the information, please contact the Virginia Geographic Information Network

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## Imagery Options - Black & White/Panchromatic

Black & White	LANDSAT 7	LANDSAT 7 <sup>(1)</sup> Reseller	SPOT	IRS-C	IKONOS	USGS DOQ '00	IKONOS	IKONOS
Panchromatic	Enhanced Thematic Mapper Plus (ETM+)	Enhanced Thematic Mapper Plus (ETM+)		Indian Remote Sensing Satellite	Carterra Map		Carterra Pro	Carterra Precision
Specifications								
RESOLUTION	15m pan/ 30m MS <sup>(17)</sup>	15 m pan/ 30m MS <sup>(17)</sup>	10m	5 Meter	1 Meter	1 Meter	1 Meter	1 Meter
SCALE (Intended)	N/A <sup>(2)</sup>	1:24,000	1:24,000	1:24,000	1:24,000	1:12,000	1:12,000	1:4,800
ACCURACY	250m	+/- 40'	+/- 40'	+/- 40'	+/- 40'	+/- 33'	+/- 33'	+/- 13'
Imagery Date <sup>(3)</sup>	1999 - 2001	1999 - 2001	1998+	1996-2000	'99-01	'99-01	'99-01	'99-01
Coverage								
Tile Size (Dimensions)	105 x 115mi	105 x 115mi	35 x 40mi	7.5' x 7.5'	User Defined <sup>(4)</sup>	3.75' x 3.75'	User Defined <sup>(4)</sup>	User Defined <sup>(4)</sup>
Tile Size (Area)	12,075 SqMi	12,075 SqMi	1400 sq. mi.	60 sq. mi.	User Defined <sup>(4)</sup>	15 sq. mi.	User Defined <sup>(4)</sup>	User Defined <sup>(4)</sup>
Tile Size (file size)	400-600 mb <sup>(5)</sup>	400-600 mb <sup>(5)</sup>	30 mb	24 mb	User Defined <sup>(4)</sup>	40-45 mb	User Defined <sup>(4)</sup>	User Defined <sup>(4)</sup>
# tiles/State	Approx. 17	Approx. 17	Approx. 54	1,000	User Defined <sup>(4)</sup>	3,200	User Defined <sup>(4)</sup>	User Defined <sup>(4)</sup>
Availability <sup>(6)</sup>	100%	100%	100%	100%	> 20%	0%	> 20%	> 20%
Cost								
Per Tile Product Pricing	475 - \$600 <sup>(7)</sup>	\$1,000 <sup>(16)</sup>	-	-	-	400 <sup>( )</sup>	-	-
Per SqMi Product Pricing	-	-	-	\$5.25 - \$13 <sup>(11)</sup>	\$50 - \$115 <sup>(14)</sup>	-	\$57 - \$144 <sup>(14)</sup>	\$81 - \$196 <sup>(14)</sup>
Statewide Product Pricing	\$8.1k - \$10.2k <sup>(8)</sup>	\$17k <sup>(8)</sup>	\$9.8 - 19.2k <sup>(10)</sup>	\$207k - 289k <sup>(13)</sup>	\$2.2 Mil <sup>(15)</sup>	\$1.2 Mil <sup>( )</sup>	\$2.5 Mil <sup>(15)</sup>	\$3.5 Mil <sup>(15)</sup>
Comparative \$ / SqMi	\$.04 - \$.05 <sup>(8)</sup>	0.08 <sup>(8)</sup>	\$.25 - \$.49 <sup>(9)</sup>	\$5.25 - \$13 <sup>(11)</sup>	\$50 - \$115 <sup>(14)</sup>	27 <sup>( )</sup>	\$57 - \$144 <sup>(14)</sup>	\$81 - \$196 <sup>(14)</sup>
Licensing/Restrictions								
Use	None	None	None	None	None	None	None	None
Access/Distribution	None	None	Limited	Limited	Limited	None	Limited	Limited
Product support for stereo compilation of features	No	Yes	No	No	No	Yes	No	No
Acquisition time (order to delivery)	Up to 23 days and dependant on weather			2 to 3 weeks after confirmed order	30 Days <sup>(18)</sup>		30 Days <sup>(18)</sup>	30 Days <sup>(18)</sup>

Chart 1 of 4

This information was compiled from Vendor web pages, current product catalogues and phone conversations with Vendor marketing staff. All information is current as of February 14, 2001.

## Imagery Options - Color/Color Infared

Product	SPOT	IRS-C	IKONOS Carterra map	USGS DOQ '94	VARDOQ '95	IKONOS Carterra pro	IKONOS Carterra precision	EYEMAP Digital Ortho	VARBASE Digital Ortho
True Color	X	X	X			X	X	X	X
Color IR	X	X	X	X	X	X	X		
Specifications									
RESOLUTION	10 m pan/ 30 m C-CIR	5 m pan/ 30 m C-CIR	1 m pan/ 4 m C-CIR	1 m	1 m	1 m pan/ 4 m C-CIR	1 m pan/ 4 m C-CIR	.3 m	.2 m
SCALE (Intended)	1:24,000	1:24,000	1:24,000	1:12,000	1:12,000	1:12,000	1:4,800	1:2,400	1:1,000
ACCURACY	+/- 40'	+/- 40'	+/- 40'	+/- 33'	+/- 33'	+/- 33'	+/- 13'	+/- 6'	+/- 2.7'
Imagery Date (3)	1998+	1998-2000	Var to '99-01	Var to '94	1995	Var to '99-01	1999	1998	1995
Coverage									
Tile Size (Dimensions)	35 x 40mi	7.5 x 7.5 min	User Defined (4)	3.75 x 3.75 min	3.75 x 3.75 min	User Defined (4)	User Defined (4)	2,000' x 3,000'	2,625' x 2,625'
Tile Size (Area)	1400 SqMi	60 SqMi	User Defined (4)	15 SqMi.	15 SqMi	User Defined (4)	User Defined (4)	.22 SqMi	.25 SqMi
Tile Size (file size)	90mb	24 mb	User Defined (4)	150 mb	150 mb	User Defined (4)	User Defined (4)	21 mb	53mb
# tiles/State	Approx. 54	1,000	User Defined (4)	3,200	3,200	User Defined (4)	User Defined (4)	220,000	180,000
Availability (6)	100%	100%	> 20%	Approx. 90%	Approx. 20%	> 20%	> 20%	15%	Limited
Cost									
Per Tile Product Pricing	-	-	-	\$7.5 - 15	\$60 - 180 (19)	-	-	-	-
Per SqMi Product Pricing	-	\$8 - \$18 (11)	\$50 - \$115 (14)	-	-	\$57 - \$144 (14)	\$81 - \$196 (14)	\$50 - \$223 (20)	\$240 - \$700 (20)
Statewide Product Pricing	\$19.7k - 38.7k (10)	\$315 - \$441k (13)	\$2.2 Mil (15)	51k	\$192 - \$576k (21)	\$2.5 Mil (15)	\$3.5 Mil (15)	\$2 - \$5.7 Mil (21)	\$9 - \$28 Mil (21)
Comparative \$ / SqMi	\$ .5 - \$.98 (9)	\$8 - \$18 (11)	\$50 - \$115 (14)	\$1.30	\$4 - \$12 (20)	\$57 - \$144 (14)	\$81 - \$196 (14)	\$50 - \$223 (20)	\$240 - \$700 (20)
Licensing/Restrictions									
Use	None	None	None	None	None	None	None	None	None
Access/Distribution	Limited	Limited	Limited	None	Limited	Limited	Limited	Limited	Limited
Product support for stereo compilation of features	No	No	No	Yes	Yes	No	No	Yes	Yes
Acquisition time (order to delivery)			30 Days (18)			30 Days (18)	30 Days (18)		

Chart 2 of 4

This information was compiled from Vendor web pages, current product catalogues and phone conversations with Vendor marketing staff. All information is current as of February 14, 2001.

## Imagery Options - Multi-Spectral

Product	LANDSAT 7	LANDSAT 7 Reseller (1)	SPOT	IKONOS	IKONOS	IKONOS
Multi-spectral	Enhanced Thematic Mapper Plus (ETM+)	Enhanced Thematic Mapper Plus (ETM+)		Carterra map	Carterra pro	Carterra precision
Specifications						
RESOLUTION	15 m pan/ 30 m MS (17)	15 m pan/ 30 m MS (17)	20 m	4 m	4 m	4 m
SCALE (Intended)	N/A (2)	1:24,000	1:24,000	1:24,000	1:12,000	1:4,800
ACCURACY	250m	+/- 40'	+/- 40'	+/- 40'	+/- 33'	+/- 13'
Imagery Date (3)	1999 - 2001	1999 - 2001	1998+	Var to '99-01	Var to '99-01	1999
Coverage						
Tile Size (Dimensions)	105 x 115 mi	105 x 115 mi	35 x 40 mi	User Defined (4)	User Defined (4)	User Defined (4)
Tile Size (Area)	12,075 SqMi	12,075 SqMi	1400 SqMi	User Defined (4)	User Defined (4)	User Defined (4)
Tile Size (file size)	400-600 mb (5)	400-600 mb (5)	45 mb	User Defined (4)	User Defined (4)	User Defined (4)
# tiles/State	Approx. 17	Approx. 17	Approx. 54	User Defined (4)	User Defined (4)	User Defined (4)
Availability (6)	100%	100%	100%	> 20%	> 20%	> 20%
Cost						
Per Tile Product Pricing	475 - \$600 (7)	\$1,000 (16)	-	-	-	-
Per SqMi Product Pricing	-	-	-	\$50 - \$115 (14)	\$57 - \$144 (14)	\$81 - \$196 (14)
Statewide Product Pricing	\$8.1k - \$10.2k (8)	\$17k (8)	\$9.8 - 19.2k (10)	\$2.2 Mil (15)	\$2.5 Mil (15)	\$3.5 Mil (15)
Comparative \$ / SqMi	\$.04 - \$.05 (8)	0.08 (8)	\$.25 - \$.49 (9)	\$50 - \$115 (14)	\$57 - \$144 (14)	\$81 - \$196 (14)
Licensing/Restrictions						
Use	None	None	None	None	None	None
Access/Distribution	None	None	Limited	Limited	Limited	Limited
Product support for stereo compilation of features	No	Yes	No	No	No	No
Acquisition time (order to delivery)	Up to 23 days and dependant on weather			30 Days (18)	30 Days (18)	30 Days (18)

Chart 3 of 4

This information was compiled from Vendor web pages, current product catalogues and phone conversations with Vendor marketing staff. All information is current as of February 14, 2001.

## Anticipated\* Satellite Imagery Products

	SPOT 5	SPOT 5	SPOT 5	SPOT 5	OrbView3	OrbView4	SPOT 5	Quickbird	OrbView3	OrbView4	IKONOS-NG
Type	Multi Spec	Color	Pan	Color	Multi Spec	Multi Spec	Pan	Pan	Pan	Pan	Pan
Resolution	10 m	10 m	5 m	5 m	4 m	4 m	2.5 m	1 m	1 m	1 m	.5 m (19")
Application Scale	1:24,000	1:24,000	1:10,000	1:10,000	n/a	n/a	1:5,000	1:2,400 (3)	n/a	n/a	n/a
Accuracy	40'	40'	n/a	n/a	n/a	n/a	n/a	.9 - 7 m (2)	1:2,400	1:2,400	n/a
Current/Proj. Price	n/a	\$20,580 (1)	\$13,700 (1)	\$20,580 (1)	~\$80 sq mile (2)	~\$80 sq mile (2)	\$27,440 (1)	n/a	~\$80 sq mile (2)	~\$80 sq mile (2)	n/a
Anticipated Launch Date	1 <sup>st</sup> Q 2002	1 <sup>st</sup> Q 2002	1 <sup>st</sup> Q 2002	1 <sup>st</sup> Q 2002	1 <sup>st</sup> Q 2002	2 <sup>nd</sup> Q 2001	1 <sup>st</sup> Q 2002	n/a (mid-2001)	1 <sup>st</sup> Q 2002	2 <sup>nd</sup> Q 2001	2004
Licensing	(4)	(4)	(4)	(4)	n/a	n/a	(4)	n/a	n/a	n/a	n/a

Chart 4 of 4

\* This information was compiled from vendor web pages, promotional advertising and phone conversations with Vendor marketing staff. All information is current as of February 15, 2001.

1 Promotional price for VA Statewide coverage. This is promotional price is available until February 16th, and covers distribution among State/Local/Municipal. govt. agencies, + Universities.

2 Anticipated price

3 Standard image products will be available as Standard (non-orthorectified) and orthorectified products. Accuracies shown reflect the Orthorectified image products.

4 Licensing for State and municipal governments and Universities.

## **Footnotes:**

1. This column represents Landsat 7 imagery that has been ortho rectified. It is only available through private USGS partner resellers.
2. The Landsat 7 products available from USGS are not processed to a ground scale.
3. Date range of available data (not custom tasking).
4. Ikonos data is produced to a user specified tile size.
5. File size based on quote by with Brandy Adams at the Earth Resources Observation Systems (EROS) Data Center.
6. Percentage of existing (archived) statewide imagery available.
7. USGS provides several Landsat 7 ETM+ products, which differ, based on the amount of post-processing for image correction. This price range covers all of the available products.
8. Prices are calculated based on (price per tile / number of square miles per tile), (number of tiles for state x cost per tile).
9. Prices are calculated based on a quote for Virginia statewide coverage from Spot Image Corp. (Quote price / number of tiles), (Quote price / number of square miles in state). The price range is based on several licensing options.
10. Prices are from a quote for the state of Virginia from Spot Image Corp. (October 2000). The price range is based on several licensing options.
11. Prices are based on the current product catalogue (January 2001). The price range reflects a number of purchase discounts (volume) and licensing options.
12. Prices are calculated (number of square miles per tile x price per square mile). The price range reflects a number of purchase discounts (volume) and licensing options.
13. Prices are calculated (number of square miles in the state tile x price per square mile). The best volume discount was used. The price range is based on several licensing options.

14. Current pricing from Space Imaging (2/15/01). Prices are based on a 30-day or greater product delivery timeframe. Custom tasking and rush order pricing are not included.
15. Prices are calculated (number of square miles in state  $\times$  price per square mile + 10%). As directed by Space Imaging, ten (10) percent was added to the calculated price to address the cost of image recollection due to adverse weather conditions. The best volume discount was used.
16. Prices based on a quote by Roger Mitchell, Earth Satellite Corporation.
17. The resolution of all multi-spectral bands is 30-meter with the exception of band 6 (Thermal), which has a 60-meter resolution.
18. The standard time frame for product delivery of newly acquired imagery is 30 days according to Space Imaging. VARGIS indicated that the current average product delivery time frame is 5 months.
19. Prices are calculated (number of square miles per tile  $\times$  price per square mile). The price range reflects a number of purchase discounts (volume) and licensing options.
20. Current pricing provided by VARGIS.
21. Prices are calculated (number of square miles in the state tile  $\times$  price per square mile). The best volume discount was used. The price range is based on several licensing options.